

UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF ILLINOIS  
EASTERN DIVISION**FILED**

JAN 19 2018

Jan 19 2018

UNITED STATES OF AMERICA

v.

CASE NUMBER:  
UNDER SEALTHOMAS G. BRUTON  
CLERK, U.S. DISTRICT COURT

JITESH THAKKAR

**18CR****36**

## CRIMINAL COMPLAINT

MAGISTRATE JUDGE MASON

I, the complainant in this case, state that the following is true to the best of my knowledge and belief.

From in or about October 2011 through in or about April 2015, in Chicago, in the Northern District of Illinois, Eastern Division, and elsewhere, the defendant violated:

*Code Section**Offense Description*

Title 18, United States Code, Section 371


Defendant knowingly conspired with others, known and unknown, to commit an offense against the United States, that is, spoofing, in violation of Title 7, United States Code, Sections 6c(a)(5)(C) and 13(a)(2), and one or more co-conspirators committed an overt act in an effort to advance the goal of the conspiracy.

Title 7, United States Code, Sections 6c(a)(5)(C), 13(a)(2), and 13c(a)


Defendant knowingly engaged in, and willfully aided and abetted, trading, practice, and conduct on or subject to the rules of a registered entity – the Chicago Mercantile Exchange – that was “spoofing,” that is, bidding and offering with the intent, at the time the bid or offer was entered, to cancel the bid or offer before execution.

This criminal complaint is based upon these facts:

X Continued on the attached sheet.

  
GREGORY A. LABERTA  
Special Agent  
Federal Bureau of Investigation

Sworn to before me and signed in my presence.

Date: 1/19/18  
Judge's signatureCity and state: Chicago, IllinoisHON. MICHAEL T. MASON, U.S.M.J.  
Printed name and Title

## **AFFIDAVIT IN SUPPORT OF CRIMINAL COMPLAINT**

I, Gregory LaBerta, being duly sworn, state as follows:

1. I am a Special Agent with the Federal Bureau of Investigation ("FBI"), assigned to the Chicago Field Division. I have been employed by the FBI as a Special Agent since 2006. I am currently assigned to an FBI squad dedicated to investigating complex financial crimes. During my career, I have been the affiant on applications for search warrants and arrest warrants in federal criminal investigations.

2. I submit this Affidavit in support of a criminal complaint and arrest warrant for JITESH THAKKAR (hereinafter "THAKKAR") for: (i) conspiracy, in violation of Title 18, United States Code, Section 371; and (ii) spoofing, in violation of Title 7, United States Code, Sections 6c(a)(5)(C), 13(a)(2), and 13c(a).

3. For the reasons set forth below, there is probable cause to believe that beginning in or around approximately October 2011 and continuing until in or around approximately April 2015,<sup>1</sup> THAKKAR, along with his co-conspirators, in Chicago, in the Northern District of Illinois, Eastern Division, and elsewhere:

a. knowingly conspired with others, known and unknown, to commit an offense against the United States, that is, spoofing (as set forth more fully below in subparagraph (b)), in violation of Title 7, United States Code, Sections 6c(a)(5)(C) and 13(a)(2), and one or more co-conspirators committed an overt

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<sup>1</sup> All dates and times in this Affidavit are approximate. Unless otherwise noted, all approximate times in this Affidavit are provided in Central Time and based on a 24-hour clock.

act in an effort to advance the goal of the conspiracy, in violation of Title 18, United States Code, Section 371; and

b. knowingly engaged in, and willfully aided and abetted, trading, practice, and conduct on or subject to the rules of a registered entity – the Chicago Mercantile Exchange (“CME”) – that was “spoofing,” that is, bidding and offering with the intent, at the time the bid or offer was entered, to cancel the bid or offer before execution, in violation of Title 7, United States Code, Sections 6c(a)(5)(C), 13(a)(2), and 13c(a).

4. The information in this Affidavit is based upon (i) my personal participation in this investigation, (ii) my training and experience, (iii) my review of documents and records obtained during the investigation, (iv) my review of certain information obtained from witnesses, including Trader #1<sup>2</sup>, and (v) an analysis of

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<sup>2</sup> The identity of Trader #1 is known to Your Affiant. On November 9, 2016, after having been indicted, Trader #1 pleaded guilty, pursuant to a plea agreement with the U.S. Department of Justice (“DOJ”), to one count of wire fraud, in violation of Title 18, United States Code, Section 1343, and one count of spoofing, in violation of Title 7, United States Code, Sections 6c(a)(5)(C) and 13(a)(2). Pursuant to Trader #1’s plea agreement, Trader #1 has agreed, among other things, to fully and truthfully cooperate with the DOJ and to provide the DOJ with complete and truthful information in any investigation. Pursuant to the plea agreement, the DOJ has agreed that, among other things, at the time of sentencing, the government shall make known to Trader #1’s sentencing judge the extent of his cooperation. If the government determines that Trader #1 has provided full and truthful cooperation as required by his plea agreement, and has rendered substantial assistance, then the government shall move the Court, pursuant to United States Sentencing Guideline § 5K1.1, to depart downward from the low end of the applicable guideline range. The DOJ has further agreed that, after Trader #1’s sentence has been imposed on the two counts to which he pleaded guilty, the DOJ will move to dismiss the remaining counts in the indictment filed against Trader #1.

trade and order data presently available and related information obtained by the FBI in connection with the investigation.

5. This Affidavit is being executed as part of an ongoing investigation and is based on my current understanding of the relevant facts based on the above. As the investigation proceeds, new facts may come to light that qualify or contradict prior facts. Because this Affidavit is being submitted for the limited purpose of establishing probable cause for the criminal complaint and arrest warrant, I have not included each and every fact known concerning this investigation. I have set forth only the facts that I believe are necessary to establish that there is probable cause to believe that THAKKAR has violated (i) Title 18, United States Code, Section 371; (ii) and Title 7, United States Code, Sections 6c(a)(5)(C), 13(a)(2), and 13c(a).

## **BACKGROUND**

### **Relevant Persons and Entities**

6. From in or about 2007 through on or about the date of this Affidavit, THAKKAR was the founder and principal of Edge Financial Technologies, Inc. ("Edge"), an information technology consulting firm headquartered in Chicago, Illinois. Based on a review of Edge's company website, Edge was "a technology partner and a platform" where "professional traders . . . [could] confidentially express [their] trading ideas and have those become trading systems, trading strategies." Since founding Edge, THAKKAR worked on several algorithmic trading strategies and worked with clients to develop custom solutions and order types. As the founder, principal, and a "Chief Architect" of Edge, THAKKAR also led, managed, and



supervised other Edge personnel in the design of custom trading software for Edge clients. THAKKAR was invited to, and served on, the CFTC's Technology Advisory Committee, Subcommittee on Automated and High Frequency Trading from approximately 2012 to at least 2013.

7. Trader #1 was a futures trader who lived in the United Kingdom. Trader #1 traded from proprietary trading companies in London and from his residence in West London, England. Trader #1 traded predominantly E-Mini S&P 500 ("E-Mini") futures contracts on the CME. Trader #1 traded futures contracts using commercially available trading software, including automated trading software.

#### Relevant Definitions and Market Background

8. The CME Group Inc. ("CME Group") was a commodities marketplace made up of several exchanges, including the CME, which was based in Chicago, Illinois. At all relevant times, the CME was a registered entity, operating as a Designated Contract Market. The CME utilized an electronic trading system called "Globex."

9. Globex was a global electronic trading platform operated by the CME Group, which utilized computer servers located in Chicago and Aurora, Illinois. Trading on Globex was conducted electronically using a visible "order book" that displayed quantities of anonymous orders (*i.e.*, offers to sell futures contracts and bids to buy futures contracts) at various price points, or "levels." Globex allowed market participants to trade futures contracts either at the exchange itself or from a location

virtually anywhere in the world. Through Globex, markets operated by the CME Group offered trading opportunities in various futures contracts, including for E-Mini.

10. The CME, through the Globex system, allowed traders to place orders in the form of “bids” to buy or “offers” to sell a futures contract. An order was “filled” or “executed” when a buyer and seller bought and sold a particular contract. The minimum price increment at which a futures contract could trade on the CME was called a “tick,” and the value of a tick for each contract was set by the CME. Futures contracts traded on set, periodic expiration cycles (*i.e.*, monthly or quarterly).

11. A futures contract was a standardized, legally binding agreement that, once executed, obligated the parties to the contract to buy or to sell a specific product or financial instrument in the future. That is, the buyer and seller of a futures contract agreed on a price today for a product or financial instrument to be delivered (by the seller), in exchange for money (to be provided by the buyer), on a future date.

12. Futures contracts were traded on markets designated and regulated by the Commodity Futures Trading Commission (the “CFTC”), the federal agency established by federal statute to regulate, among many other things, transactions related to and involving the purchase and sale of futures contracts.

13. E-Mini was a stock market index futures contract that represented an agreement to buy or sell the future cash value of the Standard & Poor’s 500 Index, which was an index of 500 U.S. stocks, at a specified date. The E-Mini futures contracts were traded on the CME through Globex.

14. Based on my training, my personal participation in this investigation, and my experience investigating previous spoofing cases, I have learned that:

a. "Spoofing" was the unlawful practice of bidding or offering with the intent, at the time the bid or offer is placed, to cancel the bid or offer before it is executed. Spoofing can be used as a method to engage in market manipulation.

b. One of the many ways that spoofing can be used as a form of market manipulation in the futures contract markets was as follows:

i. A trader places one or more large orders either to buy or to sell futures contracts on one side of the market, which the trader intends, at the time the orders are placed, to cancel before they are executed (the "Spoof Orders"). To drive prices up, the trader places Spoof Orders to buy, which create the false impression in the market of increased demand. To drive prices down, the trader places Spoof Orders to sell, which create the false impression in the market of increased supply.

ii. Near the same time the Spoof Orders are placed, the same trader also places genuine orders, in a much lower quantity, on the opposite side of the market, which the trader, by contrast, intends to execute (the "Primary Orders").

iii. By placing the Spoof Orders, the trader intends to create a market imbalance, injecting false and misleading information

(i.e., orders the trader does not intend to execute) into the market to create the false impression of increased supply or demand.

iv. This false and misleading information may, and often does, cause other market participants to buy and to sell futures contracts at quantities, at prices (including by crossing the spread), and at times, that they otherwise would not because, among other things, market participants react to the apparent (although artificial) increase in supply or demand that might, and often does, affect futures contract prices.

v. When the trader who enters Spoof Orders induces enough market participants to buy or to sell futures contracts at a quantity, price, or time that they otherwise would not have traded, the price of a given futures contract may change, resulting in the creation of a new, but artificially inflated or deflated, price. When the new artificial price has changed enough, the trader's Primary Orders trade at quantities, at prices, and at times that otherwise would not have been available, but for the Spoof Orders.

## **SUMMARY OF THE INVESTIGATION**

### **Overview of the Spoofing Scheme**

15. The FBI has been investigating the existence of a scheme to engage in manipulative order activity in the market for E-Mini futures contracts by, among others, THAKKAR and Trader #1.

16. Based on information obtained by the FBI during the investigation, which is discussed in more detail below, Your Affiant has learned that on certain days beginning in or around October 2011 and continuing until in or around April 2015 (the "Relevant Period"), in Chicago, in the Northern District of Illinois, Eastern Division, and elsewhere, THAKKAR and Trader #1 participated in a scheme, which is described further below, to manipulate supply and demand in the market for E-Mini futures contracts by placing Spoof Orders (orders that were intended, at the time they were placed, to be canceled before execution), including by (i) developing a customized, automated program designed to mitigate the risk that certain of Trader #1's Spoof Orders would be "hit," or executed, and (ii) delivering the customized, automated program to Trader #1 through which he placed Spoof Orders into the market for E-Mini futures contracts.

#### The "Back of Queue" Function

17. Specifically, based on documents and communications obtained by the FBI, and information provided by Trader #1, Your Affiant has learned that, beginning as early as January 2009, and by at least in or around May 2011, Trader #1 devised a concept for a customized, automated program to execute a strategy to place large-volume orders that, at the time the orders were placed, Trader #1 intended to cancel before execution. The program that Trader #1 devised, and that THAKKAR, Trader #1, and others, ultimately developed and implemented, modified a particular designated order by adding approximately one lot to the order, thereby increasing the quantity of the designated order by approximately one lot (the "Back of Queue



Function”). This automated Back of Queue Function was triggered when other market participants placed an order (i) at a point in time after Trader #1 had placed his designated order; and (ii) at the same price point as Trader #1’s designated order. The effect of the automatic quantity modification “up” was to revert Trader #1’s order to the back of the order queue (while also increasing his order size), behind all other orders placed at that given price point, thus significantly reducing the risk that Trader #1’s Back-of-Queue orders would be executed.

18. The operational effectiveness of the Back of Queue Function allowed Trader #1 to place a Spoof Order close to or at the best bid or offer price on either side of the market with a high degree of confidence that the orders would not be executed. This is because Trader #1’s order remained at the back of the queue and—due to the CME’s First-In, First-Out matching engine for E-Mini futures contracts—would not be filled unless all of the orders in front of Trader #1’s Back-of-Queue order at a certain price point were executed first.

19. Based on information provided by Trader #1, he requested and ultimately activated the Back of Queue Function in order to place into the market the Back-of-Queue orders, which were Spoof Orders that Trader #1 did not intend to be executed, or “hit.” The Back-of-Queue orders were intended to create a false sense of supply (in the case of a sell-side Back-of-Queue order) or demand (in the case of a buy-side Back-of-Queue order), induce other market participants to react to this deceptive information, and to pump or deflate the price of E-mini futures contracts, all so that Trader #1 could profit, mitigate his potential loss, or open or liquidate his

position at a more favorable quantity, price, or time than was otherwise available at the time before he activated the Back of Queue Function.

THAKKAR's Development of "NAVTrader" and its Back of Queue Function

20. Based on documents and communications obtained by the FBI, and information provided by Trader #1, Your Affiant has learned that THAKKAR, Trader #1, and others at Edge communicated via email messages, phone calls, and voicemail messages regarding the custom functionality that Trader #1 devised and requested, and Edge developed, including the parameters of the Back of Queue Function, which Trader #1 and THAKKAR also referred to in communications as the "back of the book" function. THAKKAR led and oversaw the development of trading software for Trader #1 and was his main point of contact at Edge.

21. On or about October 12, 2011, Trader #1 sent an email to THAKKAR regarding the custom functionality Trader #1 requested. Among other functions, Trader #1 described "Join" and "Join Side" functions as two similar functions he would use to place orders automatically upon certain triggering events in the market for E-Mini futures contracts. Trader #1's email continued, under a section labeled "Back of the book," that "[f]or both of the above order types"—i.e., "Join" and "Join Side":

[W]e need to have the option to keep the order at the back of the book. We achieved this by increasing/decreasing the order by 1 lot after it was activated every time a new order was placed on my JOIN activated order. This started to look a little strange with 1 lots changing all the time, so we will have to make it that the order is increased by 1 every time an order greater than say 20 lots is placed. This value may be subject to change.

22. After receiving this message, THAKKAR engaged in a series of emails with Trader #1 to begin work on the requested project. For example, on or about November 3, 2011, after exchanging numerous prior emails with Trader #1, THAKKAR emailed Trader #1 and wrote, "Here are my notes from yesterday's talk. I'd appreciate it, if you can clarify them more, and add more examples." THAKKAR asked Trader #1 to clarify "when we'd delete the order upon partial fill," and also asked Trader #1 to "clarify" the "back of book" function and other functions. Specifically, THAKKAR wrote in the notes, "back of book – what is the trigger" and listed the following preliminary criteria and parameters for this "back of book" function:

[E]veryone [*sic*] someone else places 10 on top of your order,  
increase your order by 1 lot.

you place 300qty order  
another 10+ qty comes in, change to 299  
another 10+ qty comes in, change to 300  
keep changing it between 299 or 300.

23. On or about November 5, 2011, Trader #1 replied to THAKKAR's November 3, 2011 email and answered THAKKAR's specific question about when to "delete the order upon partial fill" and noted "[t]he rest of the stuff you have accurately remembered."

24. On or about November 10, 2011, THAKKAR sent an email to Trader #1 confirming that "[w]e have a working version of the application, with most of the features working." In his email, THAKKAR asked Trader #1 to "[p]lease read the attached document carefully" because "[t]he software is made to work exactly as this document states." The attachment to THAKKAR's email included detailed

descriptions of the “Back of the book” functionality as well as the associated “Join” and “Join Side” order types with which this functionality could be used. Specifically, the attachment to THAKKAR’s email stated (highlighting omitted):

If “Back of the book” option is checked, based on the threshold qty (assume the default value 10 is used), the app will increase/decrease the order qty by 1 lot (after this [JOIN or JOIN SIDE] order is activated) every time new lots more than 10 (exclude 10) are placed on this order. Example: another 10+ qty order comes, change to 299, another 10+ qty order comes, change to 300. Keep changing between 299 or 300.

25. On or about November 11, 2011, THAKKAR sent Trader #1 an email bearing the subject “First test version” and attaching a file called “NAVTrader.” In his email, THAKKAR instructed Trader #1 how to “unzip” or open the file. Based on an analysis of the contents of the attached file, Your Affiant has learned that this file contained computer code files relating to the “Join,” “Join Side,” and “Back of Book” functionalities.

26. During the following months, THAKKAR sent and caused to be sent to Trader #1 several iterations of the custom trading program—*i.e.*, the “NAVTrader”—that Edge was developing for Trader #1.

THAKKAR’s Consulting Agreement with Trader #1 for NAVTrader

27. Based on documents and communications obtained by the FBI, and information provided by Trader #1, Your Affiant has learned that on or about January 25, 2012, after numerous communications with Trader #1 and with others at Edge regarding the development of the NAVTrader program, THAKKAR sent Trader #1 an email attaching a “Consulting Agreement” that, among other things,

confirmed the purpose of Trader #1's Back of Queue Function (which the agreement refers to as the "back of book" function):

a. In the "Scope of Services to Client" section of this agreement, it stated "(he doesn't want to be hit on the join orders)"—a "Join" order being a custom order type that NAVTrader supported—which would be implemented using a "new functionality" that included "back of book."

b. In addition, the "Software Rights" section of the agreement provided that "[b]oth [Edge] and [Trader #1] shall own the all [sic] rights to the source code. At the end of the project, [Edge] shall have all rights to modify, use or sell any code, or derivative work in any form."

28. On or about January 26, 2012, after sending the January 25, 2012 consulting agreement described in the preceding paragraph, THAKKAR sent an email to Trader #1, attaching and forwarding a document that was previously sent to THAKKAR and that included some of the same text as the "Scope of Services" section of the January 25, 2012 consulting agreement. Among other text, the attached document included the same statement in the "join order" section that "(he doesn't want to be hit on the join orders)" and added a notation to this section in italicized type: "*(Please explain in detail with an example).*"

29. On or about January 30, 2012, in response to THAKKAR's January 25, 2012 email attaching the agreement, Trader #1 replied by email with some comments and requests to clarify his requirements. That same day, THAKKAR responded to Trader #1 via email, "Yes, no problem. We will do all these items."



THAKKAR Demonstrates His Knowledge  
of the Futures Trading Industry and the Crime of Spoofing

30. Based on documents which Your Affiant has reviewed in connection with this investigation, there is probable cause that THAKKAR was familiar with the use of software programs in the futures trading industry and with the crime of spoofing at the time of his interactions with Trader #1. For example:

a. On or about February 17, 2012, mere weeks after transmitting the version of the Consulting Agreement to Trader #1 as described above in paragraph 27, THAKKAR sent an email to another individual, whose identity is known to Your Affiant, attaching an academic paper entitled "High-Frequency Trading." In this email message, THAKKAR stated, "I've used many concepts from this file to talk about history of HFT [*sic*], and algo trading." Based on my review of publicly available sources, Your Affiant has learned that the paper attached to THAKKAR's message was written in approximately 2011.

b. On or about March 27, 2012, just over two months after transmitting the Consulting Agreement to Trader #1 as described above, THAKKAR emailed Trader #1 and others to note that THAKKAR "was selected to serve on CFTC's subcommittee on Automated and High Frequency Trading." In this email message, THAKKAR stated, "I want to make sure CFTC understands the industry, and help define proper/minimal regulations."

c. In addition, that same year, on or about May 11, 2012, THAKKAR further demonstrated his familiarity with the futures trading industry and

regulation—and with the crime of spoofing in particular—by appearing to author a presentation, which was obtained by the FBI in this investigation and which I have reviewed, entitled “High Frequency Trading Strategies Categories.” This presentation listed THAKKAR as the author and included a section called “Order Book Analysis” which, in turn, included the line-item “Spoofing [illegal under Dodd-Frank]” (brackets in original).

Trader #1’s Use of the Back of Queue Function to Place Spoof Orders

31. According to Trader #1, as well as an analysis of trade and order data performed during the FBI’s investigation, Trader #1 used the Back of Queue Function in the NAVTrader program to place Spoof Orders in the market for E-Mini futures contracts starting in or about January 2012 and continuing through in or about October 2013. Based on the analysis of trade and order data, starting in or about January 2012 and continuing through in or about October 2013, Trader #1 activated the Back of Queue Function in the NAVTrader program hundreds of times, resulting in the placement of thousands of Back-of-Queue orders in the market for E-Mini futures contracts.

32. As one example, according to Trader #1 and based on an analysis of trade and order data performed during the FBI’s investigation, on or about February 25, 2013, at approximately 13:37:35.363, using the Back of Queue Function, Trader #1 placed a Spoof Order to sell 571 E-Mini futures contracts at \$1,504.25, which was modified to increase in quantity (and thereby move to the back of the order queue) 31 times during the life of the order. Approximately 19 seconds after that first

Back-of-Queue order was placed, at approximately 13:37:54.313, using the Back of Queue Function, Trader #1 placed a second Spoof Order to sell 571 E-Mini futures contracts at \$1,504.00, which was modified to increase in quantity (and thereby move to the back of the order queue) 27 times during the life of the order. Both 571-lot Back-of-Queue orders were cancelled, without any executions, at 13:42:43.026, having been active in the market for approximately 307.663 and 288.713 seconds, respectively. During the life of the two Back-of-Queue orders, Trader #1 fully or partially executed six Primary Orders, three of which were placed during the life of the Back-of-Queue orders and three of which had already been pending in the market, totaling over 1,900 lots. From those six Primary Orders, Trader #1 collectively bought over 1,500 E-Mini futures contracts at price levels of \$1,502.50, \$1,503.00, \$1,503.25, and \$1,503.75. Trader #1 purchased over 960 of the E-Mini futures contracts aggressively (*i.e.*, by crossing the spread to trade), totaling over 50% of the order quantity in Trader #1's six Primary Orders and over 64% of the contracts that Trader #1 purchased.

33. As a second example, according to Trader #1 and based on an analysis of trade and order data performed during the FBI's investigation, on or about March 8, 2013, at approximately 9:52:23.983, using the Back of Queue Function, Trader #1 placed a Spoof Order to sell 570 E-Mini futures contracts at \$1,541.00, which was modified to increase in quantity (and thereby move to the back of the order queue) 32 times during the life of the order. Approximately 5 milliseconds after that first Back-of-Queue order was placed, at approximately 9:52:23.988, using the Back

of Queue Function, Trader #1 placed a second Spoof Order to sell 570 E-Mini futures contracts at \$1,541.25, which was modified to increase in quantity (and thereby move to the back of the order queue) 34 times during the life of the order. Both 570-lot Back-of-Queue orders were cancelled, without any executions, at 9:55:09.739, having been active in the market for approximately 165.756 and 165.751 seconds, respectively. During the life of the two Back-of-Queue orders, Trader #1 fully executed two Primary Orders, both of which were placed during the life of the Back-of-Queue orders, totaling over 1,900 lots. From those two Primary Orders, Trader #1 collectively bought over 1,900 E-Mini futures contracts at price levels of \$1,539.75, \$1,540.25, and \$1,540.50. Trader #1 purchased over 1,700 of the futures contracts aggressively (*i.e.*, by crossing the spread to trade), totaling over 90% of the order quantity in Trader #1's two Primary Orders (and over 90% of the contracts that Trader #1 purchased in these fully executed orders).

34. Trader #1 reaped substantial trading profits as a result of his use of the Back of Queue Function to place Spoof Orders.

THAKKAR's Continued Contact with Trader #1 and Work on NAVTrader

35. Based on documents and communications obtained by the FBI, and information provided by Trader #1, Your Affiant has learned that THAKKAR sent and caused to be sent to Trader #1 many additional versions of the NAVTrader program, including after October 2013. THAKKAR, others at Edge, and Trader #1 communicated by email and other means regarding issues with, and modifications to, the NAVTrader program through at least in or about January 2015. For example, on

or about January 9, 2015, following a series of what appears to Your Affiant to be troubleshooting efforts and revisions to the NAVTrader program since early 2012, THAKKAR forwarded to Trader #1 by email what appears to have been a further revised version of NAVTrader.

36. THAKKAR also continued to reference Edge's purported contractual right to resell the NAVTrader program and/or its functionality that Edge had created for and delivered to Trader #1. For example, on or about December 16, 2014, THAKKAR sent an email to Trader #1 regarding this issue and emphasized, "Mate, I remember we did this project for very low cost, and you were suppose[d] to help me sell to other traders so that we can make some money."

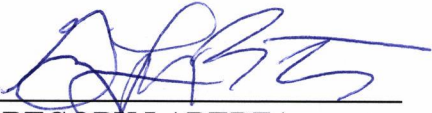
37. THAKKAR also continued to communicate with Trader #1 until at least in or about April 2015 in order to request additional payment for Edge's work on NAVTrader. For example, on or about April 5, 2015, THAKKAR sent an email to Trader #1 inquiring about Trader #1's payment for Edge's work on an updated version of NAVTrader, writing, among other things, "Did you expect us to work for free?" In exchange for Edge's consulting work on NAVTrader for Trader #1, THAKKAR received at least \$24,200.



## CONCLUSION

38. Based on the foregoing, there is probable cause to believe that THAKKAR, along with others known and unknown, participated and engaged in:

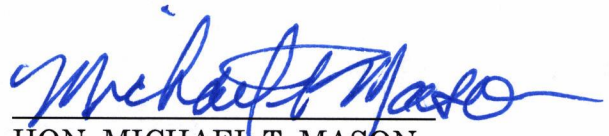
- (i) conspiracy, in violation of Title 18, United States Code, Section 371; and
- (ii) spoofing, in violation of Title 7, United States Code, Sections 6c(a)(5)(C), 13(a)(2), and 13c(a).



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GREGORY LABERTA  
Special Agent  
Federal Bureau of Investigation

Signed and sworn to before me this 19<sup>th</sup> day  
of January, 2018, in Chicago, Illinois



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HON. MICHAEL T. MASON  
United States Magistrate Judge